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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,289	04/07/2000	YAACOV ALMOG	UDS	5383

7590

09/04/2002

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EXAMINER

XU, LING X

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 09/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/529,289	<b>Applicant(s)</b> ALMOG ET AL.	
	<b>Examiner</b> Ling X. Xu	<b>Art Unit</b> 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 7-12, 14-30, 32, 37-42 and 45 is/are pending in the application.
- 4a) Of the above claim(s) 30, 37-41 and 45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-12, 14-29, 32 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s). <u>20</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                 |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other:  |

### **DETAILED ACTION**

1. In view of the appeal brief filed on 8/27/2002, PROSECUTION IS HEREBY REOPENED. A new ground rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Response to Amendment***

2. Applicants' amendments filed on 8/27/2002 have been entered.

3. Upon reconsideration, the Examiner will extend the examination to include all the non-elected species in Group I, including claims 1-3, 7-12, 14-29, 32, and 42. Claims 30, 37-41 and 45 are directed to a method. Claims 30, 37-41 and 45 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 7-12, 14-29, 32, and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 42, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1 and 42 recite the broad recitation a silane coupling agent, and the claim also recite amino propyl triethoxy silane which is the narrower statement of the range/limitation. The amino propyl triethoxy silane is a silane coupling agent, see page 8, line 3, of the specification.

In claim 10, the term "PET" should be defined.

In claim 28, the term "substantially" is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear how the underlayer is substantially free of particulate matter.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 7-12, 19-21, 28-29, 32 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Lever et al.(EP-0458481).

Lever discloses a substrate suitable for printing a toner image thereon comprises a sheet of plastic (page 2, lines 23-58), such as polypropylene (BOPP), polyethylene, polyvinylchloride, PET, and polycarbonate. These plastics are preferably biaxially oriented (page 2, line 48).

Lever also discloses a underlayer coating, the lacquer layer, comprises a polymer material which has crosslinkable functional groups, such as amine and trihydroxy silyl groups (page 3, lines 2-9), and an overlayer coating, the toner image receptive layer, comprises a polymer material to which a toner image can be fused and

fixed (page 4, line 42-page 5, line 38). Examples of such materials are acrylic acid copolymers, vinyl pyridine copolymer, styrene butadiene copolymer.

Lever further discloses that the overlayer is less than 2.5um (page 6, lines 5-15), which is within the range recited in claim 42.

Accordingly, Lever meets all the limitations of claims 1,3, 7-12, 19-21, 28-29, 32 and 42.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over level et al.

As stated above, Lever discloses a substrate suitable for printing a toner image thereon comprises a sheet of plastic, an underlayer coating and an overlayer coating as recited in claims 1 and 42.

Level does not disclose the overlayer has to be free of particulate, wax or pigment, or the underlayer has to be free of particulate matter.

However, particulate matter, wax and pigment are well known optional additives for the image receiving substrates. Addition of these additives depends on the application of the substrates. As indicated in Level, page 3, line 10, the lacquer layer

(underlayer) preferably additionally comprises finely particulate materials when the disclosed substrate is used as a drafting materials (depends on the application of the substrate).

Therefore, absence of evidence that the claimed overlayer or underlayer being free of particulate matter (or wax, pigment) is critical, it would have been obvious to one of ordinary skill in the art to decide whether use or not use the optional additives, such as particulate matter, wax or pigment, when it is applicable.

7. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Level et al.

As stated above, Lever discloses a substrate suitable for printing a toner image thereon comprises a sheet of plastic, an underlayer coating and an overlayer coating as recited in claims 1 and 42.

Level does not specifies that the overlayer comprises ethylene acrylic acid copolymer, however, Level discloses that the overlayer comprises acrylic acid copolymer(page 5, lines 1-35). Ethylene acrylic acid copolymer and acrylic acid copolymer have similar structure and have same or similar properties and utilities.

Therefore it would have been obvious to one of ordinary skill in the art to use the ethylene acrylic acid copolymer as one of acrylic acid copolymer derivative in Level's overlayer with the expectation that compound similar in structure would have similar properties and utilities.

With respect to the acrylic acid comonomer percentage weight recites that the styrene copolymer/acrylic polymer ratio is 0.1 to 10:1.0 (about 9%-90% of acrylic acid comonomer in the copolymer), which is within the claimed range recited in claims 15-18.

8. Claims 1, 22 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Level et al.

As stated above, Lever discloses a substrate suitable for printing a toner image thereon comprises a sheet of plastic, an underlayer coating and an overlayer coating as recited in claims 1 and 42.

Lever does not disclose the silane couple agent is the amino propyl triethoxy silane. However, Lever discloses the underlayer coating, the lacquer layer, comprises a polymer material which has crosslinkable functional groups of amine and trihydroxy silyl groups. Trihydroxy silyl group is silane couple agent. Polymer material with amine and trihydroxy silyl groups has similar structure as the claimed polymer with amino propyl triethoxy silane and these polymers have same or similar properties and utilities.

Therefore it would have been obvious to one of ordinary skill in the art to use claimed polymer with amino propyl triethoxy silane in Level's underlayer with the expectation that compounds similar in structure would have similar properties and utilities.

9. Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Level et al.



As stated above, Lever discloses a substrate suitable for printing a toner image thereon comprises a sheet of plastic, an underlayer coating and an overlayer coating as recited in claims 1 and 42.

Level does not specify that the weight per square meter of the underlayer and overlayer.

However, Level discloses that same and/or similar materials used in the underlayer and overlayer. Levels also discloses the thickness of underlayer is at least 2 um and the thickness of overlayer is less than 2.5um, which are within the ranges as claimed.

The cited document discloses a composition prepared from the same components as claimed in the present application except for the particular amounts and parameters. The claimed parameters are expressed differently and thus may be distinct from disclosed, it is incumbent upon applicants to establish that such difference is unobvious. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to employ the particular amounts and/or parameters as claimed, since it is well-established that merely selecting proportions and ranges is not patentable absent a showing of criticality. In re Becket, 33 USPQ 33, and In re Russell, 169 USPQ 426.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 703-305-0395. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 703-308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

lx

  
DEBORAH JONES  
SUPERVISORY PATENT EXAMINER

August 29, 2002